



MWS3A-AT-AD

RF ceiling microwave presence detector – 1-10V

Overview



The MWS3A-AT-AD is a microwave motion sensor combined with two output channels capable of controlling incandescent, fluorescent and compact fluorescent lighting.

The MWS3A-AT-AD detects movement using a highly sensitive microwave detector. This works by emitting low power microwave signals and measuring the reflections as the signals bounce off moving objects.

Output Channel 1 comprises a mains voltage relay capable of simple on/off switching, while Output Channel 2 provides dimmable control of 1-10V ballasts.

Functioning as a presence detector, the unit can turn lights on when a room is occupied and off when the room is empty. Optional settings allow lights to be turned off in response to ambient daylight, or to implement a maintained illuminance (constant light) system. The unit also includes stored scenes for versatile manual control of lighting levels.

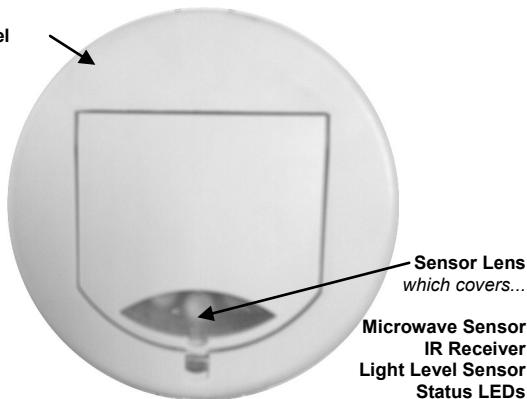
The MWS3A-AT-AD can be used as a standalone unit or integrated with other devices as part of a system. The built-in RF transceiver allows wireless communication with all other **An-10®** compatible products, e.g. the AT-BB-IN Input Unit, useful for push-button scene selection and absence detection.

All functionality is fully programmable.

Features

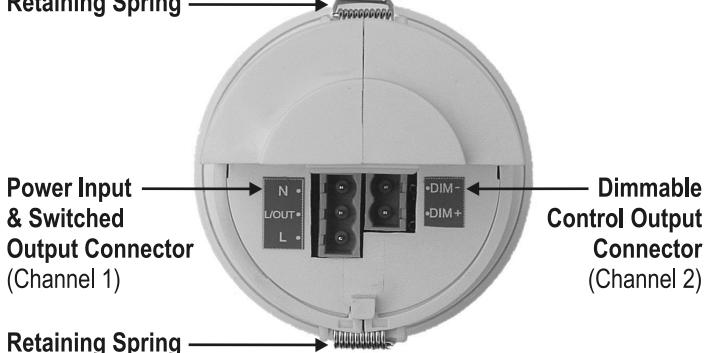
Front features

Mounting Bezel



Back features

Retaining Spring



Microwave Sensor

Detects movement within the unit's detection range, allowing load control in response to changes in occupancy.

IR Receiver

Receives control and programming commands from an IR (infrared) handset.

Light Level Sensor

Monitors the ambient light level, allowing load control based on minimum and maximum Lux Level and also for providing Maintained Illuminance (constant light) control.

Status LEDs

These flash Red and/or Green to indicate the following:

Walk Test LED active	when movement is detected
Valid setting received	
Invalid setting received	
Software reset received	
Factory reset received	

Power Input & Switched Output Connector (Channel 1)

Used to connect mains power to the unit and to connect a switched load.

Dimmable Control Output Connector (Channel 2)

Used to connect 1-10V controllable ballasts and transformers for dimmable loads.

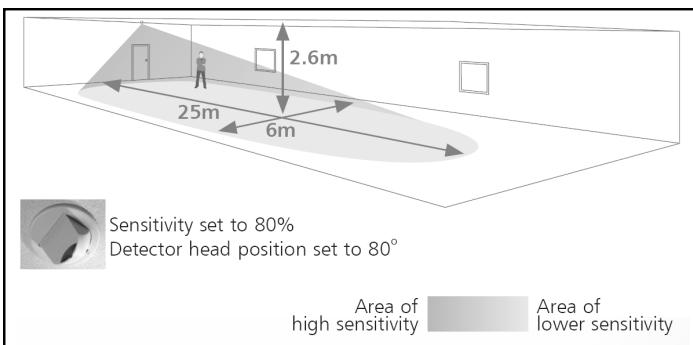
Installation

Choosing a Suitable Location

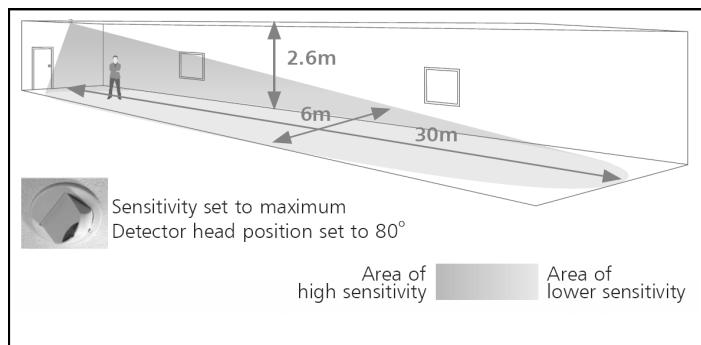
The MWS3A-AT-AD is designed to be ceiling mounted and must satisfy the following criteria:

- Avoid positioning the unit where direct sunlight may enter the sensor element.
- Do not site the sensor within 1m of any lighting, forced air heating or ventilation.
- Do not fix the sensor to an unstable or vibrating surface.
- Position the sensor so that the occupants of the room fall inside the detection zone shown in below.
Note that the detection zone illustrated is based on a recommended mounting height of 2.8m. A lower height will decrease the overall size of the detection zone.

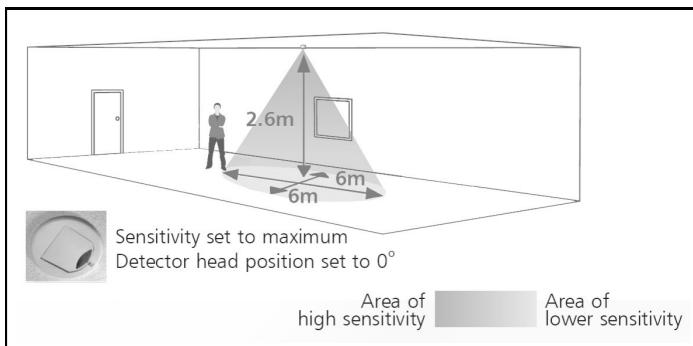
Detection diagrams



Ideal for large office or classroom



Ideal for corridor or aisle applications



Ideal for open plan areas and offices

Note. If the range is compromised by the ceiling construction / material. Add the supplied 20mm spacer ring. See page 3 for fitting details.

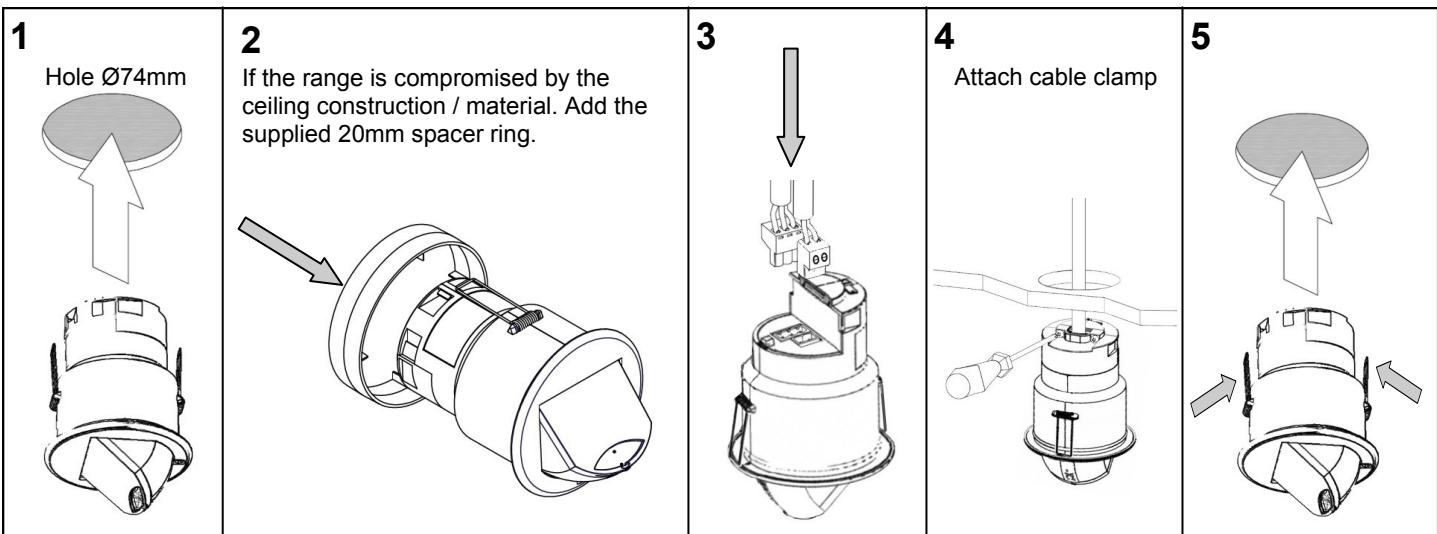
The MWS3A-AT-AD is designed to be mounted using either:

- Flush fixing, or
- Surface fixing, using the optional Surface Mounting Box (part no. MWS3A-DBB).

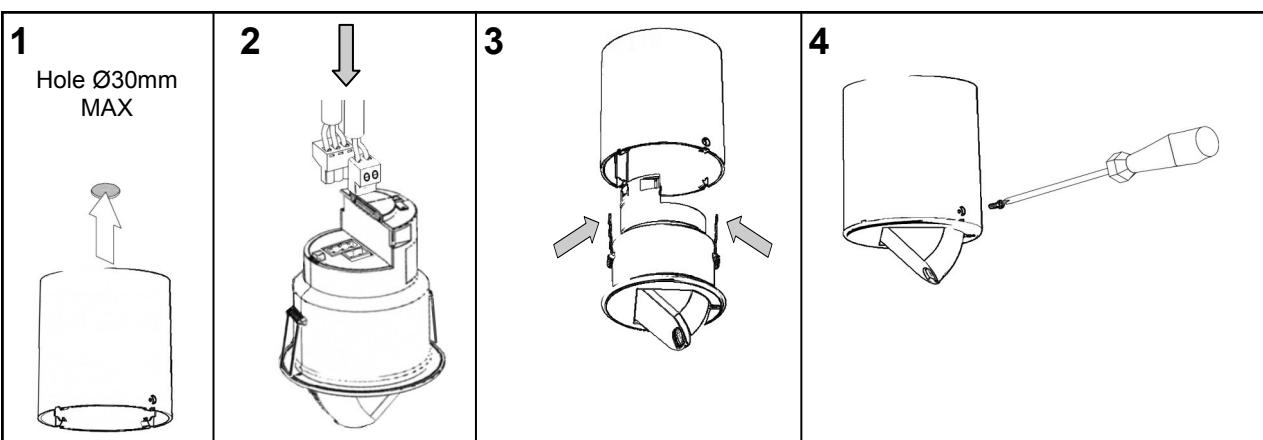
Both methods are illustrated below.

Warning - be careful bending springs when mounting unit.

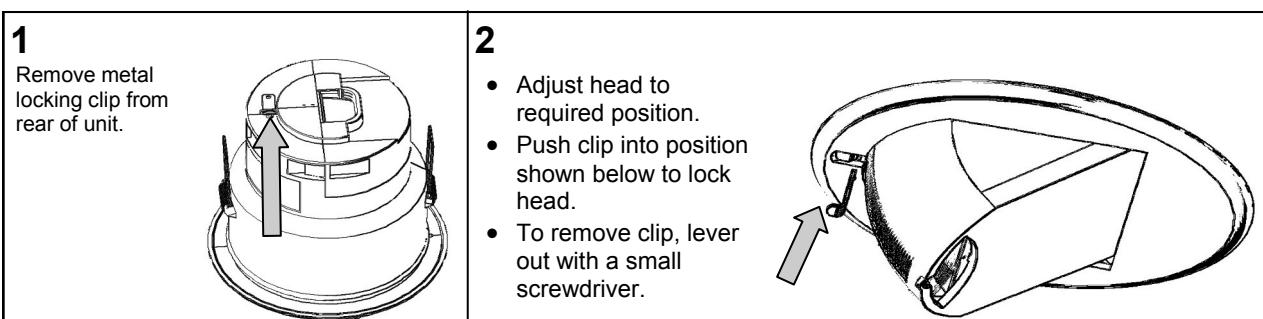
Flush fixing



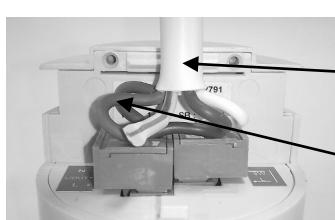
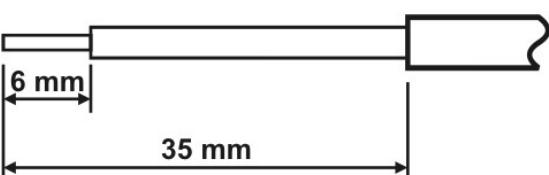
Surface fixing



Head locking



Wire stripping details



Important

Ensure that the cables are formed as shown before affixing the cable clamp. The clamp MUST clamp the outer sheath(s) only.

Bend cores as shown.

Wiring examples

Channel 1 (switched output) of the MWS3A-AT-AD can either be used to switch a separate channel of standard, non-dimming luminaires, or to isolate the mains supply to dimming ballasts (saving on the standby current of the ballasts).

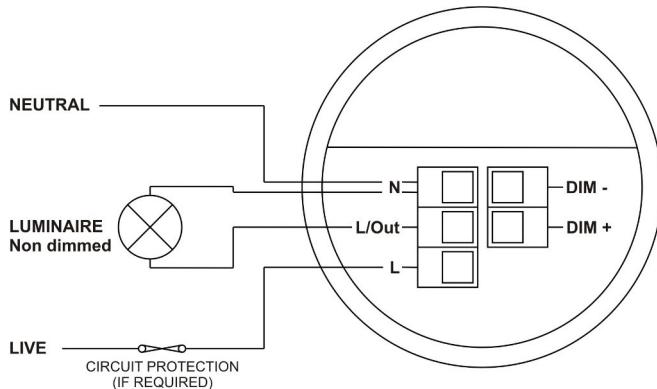
Multiple luminaires may be connected in parallel to Channel 1 (via the **N** and **L/Out** terminals) as long as the maximum total load is not exceeded.

Channel 2 (dimmable output) of the MWS3A-AT-AD can be used to control the light output of luminaires that are fitted with dimming ballasts/transformers.

Up to 10 ballasts/transformers can be connected in parallel to Channel 2 (via the **DIM-** and **DIM+** terminals). Ensure that correct polarity is maintained at each ballast.

The wiring examples below show common methods of connecting the output channels for a single detector unit.

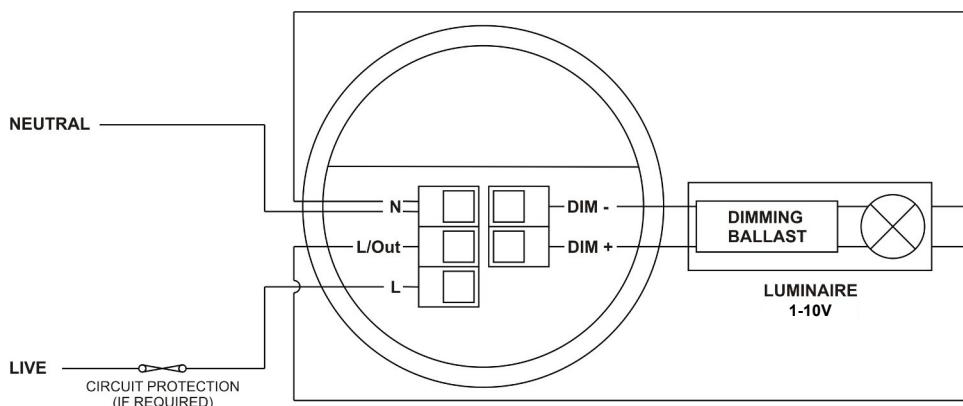
Example 1: Single channel switching



Functionality

- Simple On/Off load control.
- Presence detection.
- Absence detection using an AT-BB-IN Input Unit and associated switch/button plate.
- Manual On/Off control using IR Handset.
- Lux switching.

Example 2: Single channel dimming



Functionality

- Dimmable load control via suitable ballast/transformer.
- Mains power to ballast switched by channel 1.
- Presence or absence detection (with or without Lux Level control).
- Manual scene/level control using IR Handset or AT-BB-IN Input Unit and associated switch/button plate.
- Optional Maintained Illuminance Level control.

Power-up test procedure

When power is applied to the unit, the load will turn on immediately.

Vacate the room or remain very still and wait for the load to switch off (this should take around 10 minutes).

Check that the load switches on when movement is detected.

The unit is now ready for programming.

Fault finding

What if the load does not turn ON?

- Check that the live supply to the circuit is good.
- Check that the load is functioning by bypassing the sensor (e.g. link terminals **L** and **L/ Out** on Channel1).
- Check that the unit is correctly addressed, see 'Step 1: Set channel addresses and channel load type' on page 7.
- If the detection range is smaller than expected, check the diagrams in page 2. Rotating the sensor slightly may improve the detection range. If still reduced it may be compromised by the ceiling construction / material. Add the supplied 20mm spacer ring. See page 3 for fitting details.

HINT: *The Walk Test LED function can be used to check that the unit is detecting movement in the required area (see page 8 for further details).*

What if the load does not turn OFF?

- Ensure that the area is left unoccupied for longer than the Time Adjustment Period (default is 10 minutes).
- Ensure that the sensor is not adjacent to circulating air, heaters or lamps.

HINT: *The Walk Test LED function can be used to check that the unit is detecting movement in the required area (see page 8 for further details).*

Basic programming

The functionality of the MWS3A-AT-AD Sensor is controlled by a number of parameters which can be changed or programmed by any of the following devices:

- **UHS4** Infrared Handset
- **UNLCDHS** Infrared Handset (with LCD)

For most basic programming operations the UHS4 handset is recommended and the following procedures are based on using this device.

Point the handset at the Sensor and send the required programming commands to the unit as shown in Steps 1, 2 and 3.

Valid commands will be indicated by a green LED flash.
See page 1 for details of other LED responses.

Important note

Do not use as hub if the installation uses Area Codes. If Area Codes are used, make a non MWS3A-AT detector or Slim-line controller a hub in the same local codes as the MWS3A-AT.

Step 1: Set channel addresses and channel load type

The Sensor has two output channels:

- Channel 1 - Switched Output
- Channel 2 - Dimmable Output

and one input channel:

- Channel 3 - Microwave Sensor

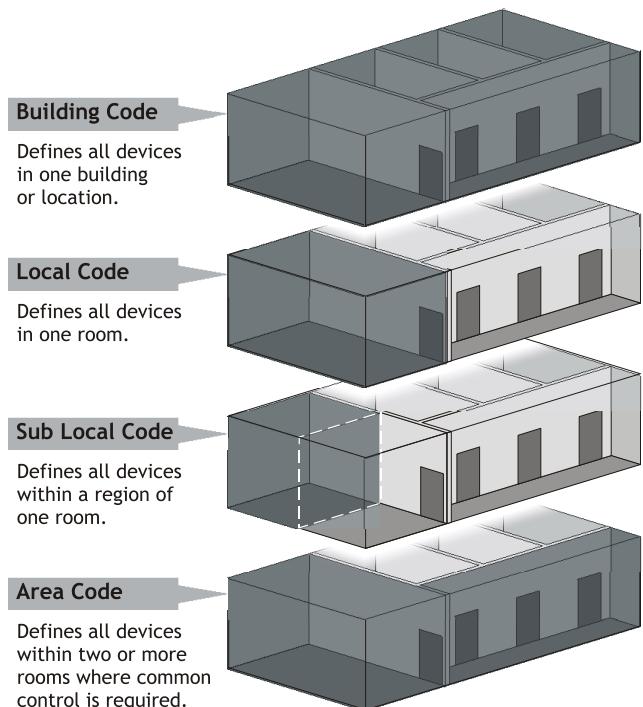
To relate the function of different channels it is necessary to set the addresses correctly. For example, a scene select message sent from a device with a Local Code of 1 will only be actioned by devices that also have a Local Code of 1.

To program the settings for a specific channel on the Sensor you must specify the appropriate channel number (i.e. 1 to 3) using the programming device.

If no channel number (or channel 0) is specified, all channels will be set to the same address.

The output channels also have Circuit numbers. This allows different physical channels to be linked and controlled as a single Circuit.

Channel 2 (the dimmable output) can control 1-10V ballasts.



Using the UHS4 handset...

Activate Configuration Mode **F + 7**

CONFIG

C

Select Channel Number
from 1 to 3
0 (or no number) selects all channels



SENSING

Set Building Code **B**

enter code
from 1 to 999

Set Local Code **L**

enter code
from 1 to 999

Set Sub-local Code **S**

enter code
from 1 to 99

Set Area Code **A**

enter code from 1 to 999, or 0 to clear
all area codes from selected channel(s)

Change Circuit Number

F + B

Circuit Number
from 1 to 999



Channel Number
from 1 or 2

HINT: Press **UP**
again to send
the same setting
to another device

Note: for applications where there is only one channel of lighting being controlled in a room there is no need to select the channel number.

Add another Channel to same Circuit

Return to User Mode

F + 7

CONFIG

Basic programming

Step 2: Set-up sensor functionality

Detection Mode

The Detection Mode for both output Channels 1 and 2 can be set to behave in Presence or Absence mode:

- **Presence** mode allows a channel to turn on when movement is detected. Once turned on, if no movement is detected the Time Adjustment (10 minutes by default) the channel will turn off.
- **Absence** mode requires the channel to be turned on by some other means (e.g. by issuing a Scene Select message via an Input Unit or IR Handset). Once turned on, if no movement is detected for period of time (the Time Adjustment) the channel will turn off.

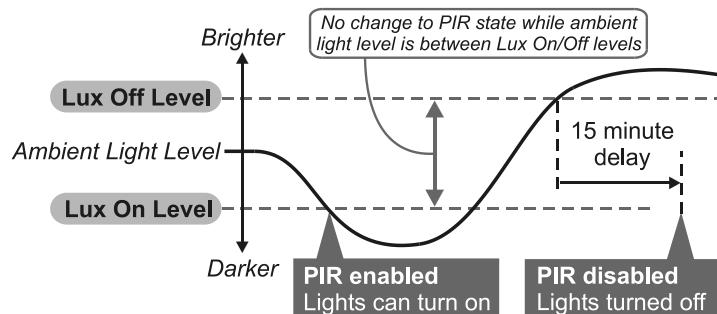
In either case, sensitivity to movement of the Microwave sensor (Channel 3) can be adjusted using the Sensitivity parameter (set to 5 by default).

HINT: To assist in setting the Sensitivity, turn on the Walk Test LED which will flash red when movement is detected.

By default when the detector turns on Local Scene 1 is selected. When the detector turns off Local Scene 20 is selected. See 'Scenes Used for Occupancy Detection' in Step 3 for further details.

Switch Level On/Off

Occupancy detection can be made dependant on the ambient light level using the Lux On Level and Lux Off Level parameters.



Maintained Illuminance

The detector measures the overall light level in the detection area and calculates the correct output for the luminaires, to achieve a preset lux level (maintained illuminance or daylight harvesting).

By specifying a Maintained Illuminance Light Level the unit adjusts the output Channel levels to maintain a near constant light level.

Programming Maintained Illuminance Light Level

- **Presence detection** Sensing mode (below)
- **Absence detection** Scene mode (opposite)

Note: for applications where there is only one channel of lighting being controlled in a room there is no need to select the channel number.



Using the UHS4 handset...

Activate Sensing Mode

F + 8



Select Channel Number

from 1 to 12
0 (or no number) selects all channels

C



↑

Time Adjustment Period

B minutes from 1 to 99
or 0 = 10 seconds

Switch Level On

5 0 (disabled)
1 to 999 (enabled)

Switch Level Off

2 0 (disabled)
1 to 999 (enabled)

Light Level (Maintained Illuminance)

L 0 (disabled)
1 to 999 (enabled)

Sensitivity Level (Sets both On & Off level)

S 1 (min) to 9 (max)

Walk Test LED

ON 4

OFF 6

Detection Mode

Absence 1

Presence 3

Send the new setting

↑



SENSING

HINT: Press ↑ again to send the same setting to another device

Return to User Mode

F + 8



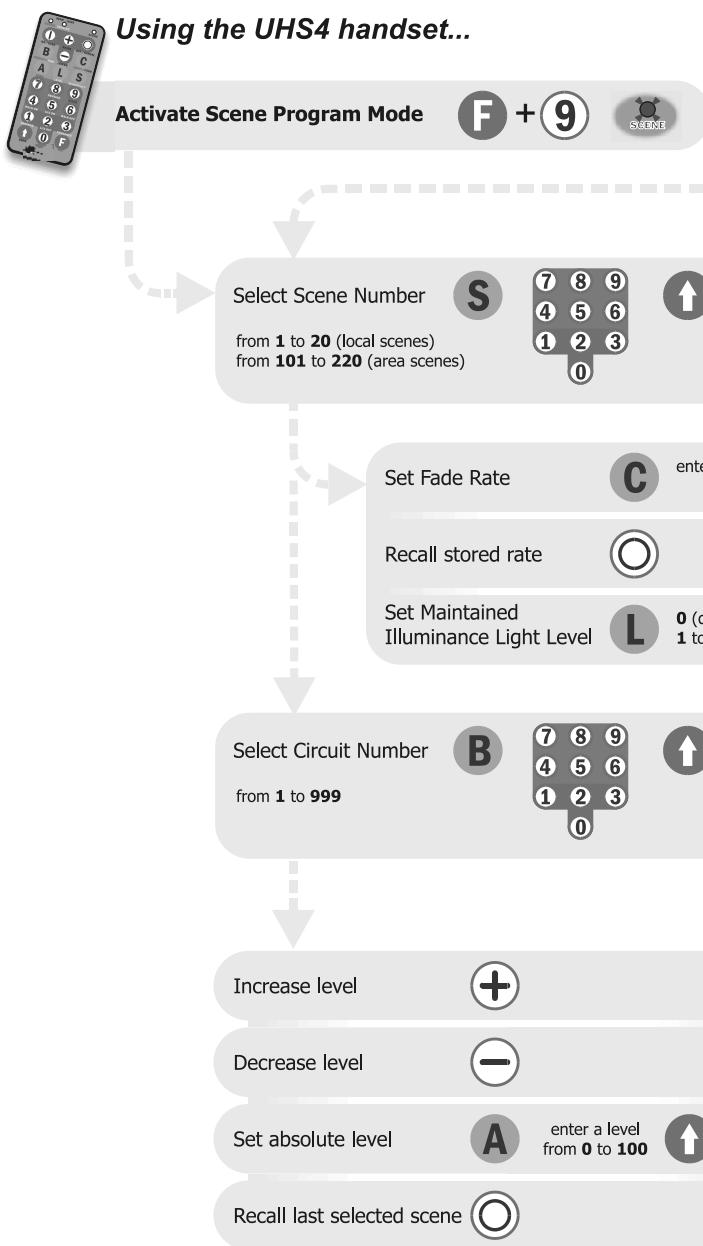
Step 3: Re-program scenes

The MWS3A-AT-AD has capacity to store 20 Local Scenes and 120 Area Scenes. By default all Scenes are pre-programmed with the following channel levels, but these can be changed as required:

Local Scenes										
	1	2	3	4	5	6	...	19	20	
Ch1	on	on	on	on	on	on	...	on	off	
Ch2	100%	75%	50%	25%	100%	75%	...	50%	0%	
Area Scenes										
	101	102	103	104	105	106	...	119	220	
Ch1	on	on	on	on	on	on	...	on	off	
Ch2	100%	75%	50%	25%	100%	75%	...	50%	0%	

NOTE: Local Scene 20 and Area Scene 120 are designated 'off' scenes within a system and should normally be programmed with all channels off or at zero. Scenes can be recalled by using an IR Handset or by a switch/button plate via an AT-BB-IN Input Unit.

Using the UHS4 handset...



Each Scene has a Fade Rate, which is the time taken for the existing output channel levels to fade to the levels defined in the selected Scene. By default this is set to 3 seconds for all Scenes.

Each Scene also has a Maintained Illuminance Level setting. By default this is set to 0 (i.e. disabled) for all Scenes.

Scenes Used for Occupancy Detection

If movement is detected (in Presence mode), Local On Scene 1 is selected. By default this switches Channel 1 On and sets Channel 2 to 100% with a 1 second Fade Rate.

If no movement is detected for the Time Adjustment Period (in Presence or Absence mode), Local Off Scene 20 is selected. By default this switches Channel 1 Off and sets Channel 2 to 0% with a 1 second Fade Rate.

NOTE: These 'On' and 'Off' Scene selections cannot be changed using the UHS4 handset. You can, however, reprogram the levels for Scenes 1 and 20 if required.

Application examples

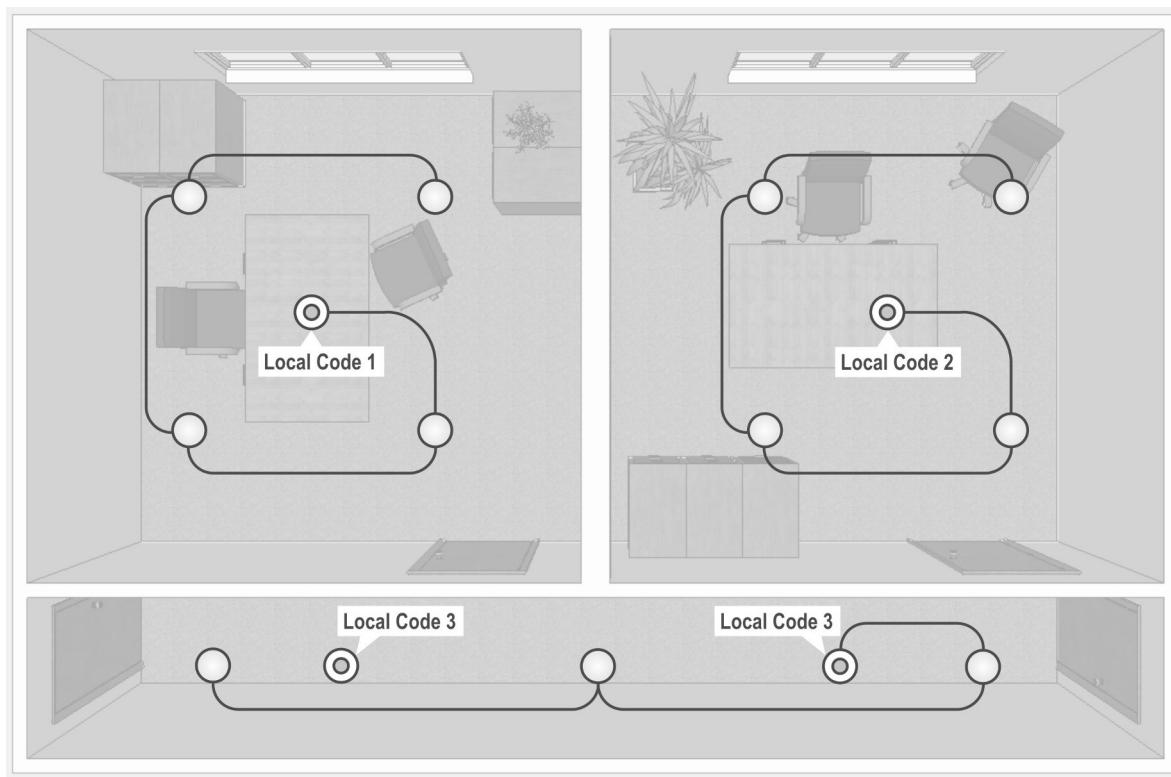
Example 1: Offices and corridor

Example 1 shows two small offices, each with four downlighters controlled by a single MWS3A-AT-AD sensor. These are set-up for Presence detection such that the lights turn on when anyone enters the room and turn off when the room is vacated.

Similarly, the corridor lights are controlled by two sensors such that if either sensor detects movement, all of the corridor lights turn on. Note that only one sensor is physically wired to the lighting circuit.

In this arrangement the devices in each room need to be programmed with a unique Local Code, although the two devices in the corridor share the same code so that they can both control the corridor lights.

In addition, each unit needs its Time Adjustment Period set to an appropriate value.

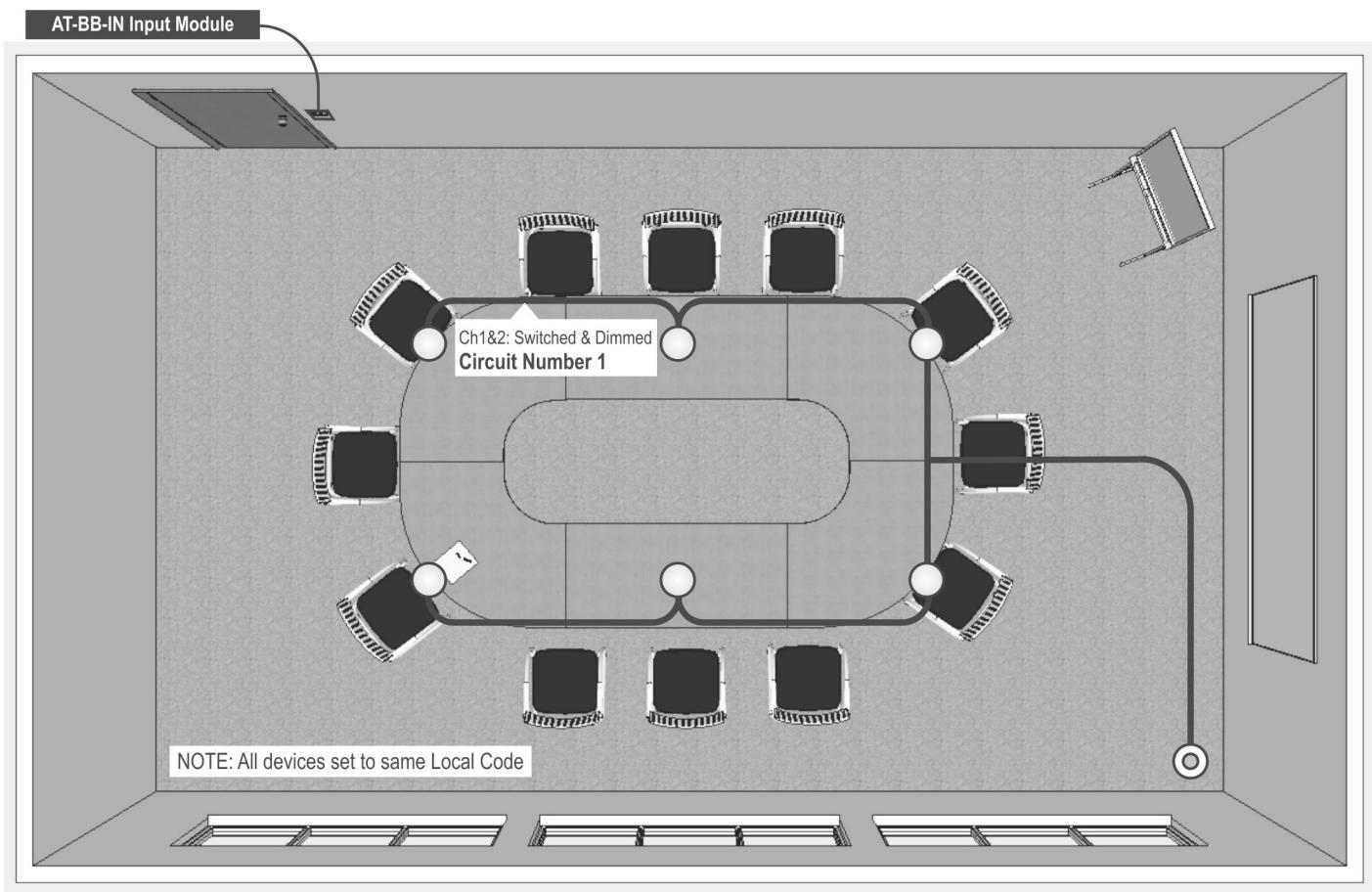


Example 2: Meeting room

Example 2 shows an application for a typical meeting room. An MWS3A-AT-AD sensor is used, set-up for Absence detection.

The sensor controls the six downlighters via the switched output (Channel 1) and dimmed output (Channel 2).

Since the detector is in Absence detection mode, lights will only turn on in response to manual operation of the button plates via the AT-BB-IN input unit or IR Handset. If no movement is detected for the specified Time Adjustment Period, the lights will automatically turn off.



KEY Detector

Downlighter

Advanced programming

The tables on pages 12 to 15 give a summary of all programmable parameters for the MWS3A-AT-AD Sensor.

Parameter Name	Default Value	Range / Options	Description	Programming Devices	
				UHS4	UNLCDHS
For Device					
Product ID	<i>Automatically assigned by the device</i>	1 to 999	A number used to uniquely identify each device within a range of devices that are set to the same Local Code.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Building Code	1	1 to 999	A number shared by all devices that belong to the same building or system.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lock	0	Enable (1) or disable (0)	Lock the An-10 network. Prevents more devices joining the network.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
For Channel 1 (Switched Output)					
Local Code	1	1 to 999	A number corresponding to the Local Code of all devices to be controlled by an associated input channel.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sub Local Code(s)	<i>Not set</i>	1 to 99 0 to clear	A number corresponding to the Sub Local Code of all devices to be controlled by an associated input channel. Up to 20 Sub Local Codes can be set for Channel 1 and 2, e.g. 15 on Ch.1 and 5 on Ch.2, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Area Code(s)	999	1 to 999 0 to clear	A number corresponding to the Area Code of all devices to be controlled by an associated input channel. Up to 32 Area Codes can be set for Channel 1 and 2, e.g. up to 16 per channel, or 20 on Ch.1 and 12 on Ch.2, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Circuit Number	1	1 to 999	Sets the circuit number for this channel.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Detection Mode	Presence	Presence or Absence	Presence mode allows the output to turn on when movement is detected and off when movement ceases. Absence mode allows the output to turn off when movement ceases, but must be manually turned on first.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Output State	<i>Set by Scene</i>	0-100% 0=off	The current output state of the channel, for example as set by a Scene Select command.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Light Level (maintained illuminance)	<i>Set by Scene</i>	0 (disabled) or 1 to 999	The maintained illuminance target level of the channel, for example as set by a Scene Select command. See page 8.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Raise from off	1	Enable (1) or disable (0)	Enables raise from off feature.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lower from off	1	Enable (1) or disable (0)	Enables lower from off feature.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Emergency output	0	Enable (1) or disable (0)	Enabling this sets the output to a 'switched permanent live' mode for emergency ballasts.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lux off period	0	0 to 999 in minutes (0=15 seconds)	Number of minutes above the Lux Off level before a lux switching decision is made.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lux switching enabled	1	Enable (1) or disable (0)	Enables or disables the output channel to respond to lux switching commands.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Detector enabled	1	Enable (1) or disable (0)	Enables the output channel to be controlled by detector occupancy.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Detector inhibit period	0	0 to 255	Detector inhibit period in 100s of milliseconds (255 = 25 seconds).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Advanced programming

Parameter Name	Default Value	Range / Options	Description	Programming Devices	
				UHS4	UNLCDHS
For Channel 2 (Dimmed Output)					
Local Code	1	1 to 999	A number corresponding to the Local Code of all devices to be controlled by an associated input channel.	✓	✓
Sub Local Code(s)	Not set	1 to 99 0 to clear	A number corresponding to the Sub Local Code of all devices to be controlled by an associated input channel. Up to 20 Sub Local Codes can be set for Channel 1 and 2, e.g. 15 on Ch.1 and 5 on Ch.2, etc.	✓	✓
Area Code(s)	999	1 to 999 0 to clear	A number corresponding to the Area Code of all devices to be controlled by an associated input channel. Up to 32 Area Codes can be set for Channel 1 and 2, e.g. up to 16 per channel, or 20 on Ch.1 and 12 on Ch.2, etc.	✓	✓
Circuit Number	2	1 to 999	Sets the circuit number for this channel.	✓	✓
Detection Mode	Presence	Presence or Absence	Presence mode allows the output to turn on when movement is detected and off when movement ceases. Absence mode allows the output to turn off when movement ceases, but must be manually turned on first.	✓	✓
Output Level	Set by Scene	0 to 100 %	The current output level of the channel, for example as set by a Scene Select command.	✓	✓
Max Value	100%	0 to 100%	Maximum dimming output level.	✗	✓
Min Value	0%	0 to 100%	Minimum dimming output level.	✗	✓
Maintained Illuminance Level	Set by Scene	0 (disabled) or 1 to 999	The maintained illuminance target level of the channel (when under manual control), for example as set by a Scene Select command.	✓	✓
Max Maintained Illuminance output level	100%	0 to 100%	Set the maximum maintained illuminance level for the channel.	✗	✓
Min Maintained Illuminance output level	1%	0 to 100%	Set the minimum maintained illuminance level for the channel.	✗	✓
Burn-in	0	0 (disabled) or 1 to 255 hours	Determines how long the output will be at 100% so that lamps 'burn -in'. The 'burn-in' time is not affected by power supply interruptions.	✗	✓
Raise from off	1	Enable (1) or disable (0)	Enables raise from off feature.	✗	✓
Lower from off	1	Enable (1) or disable (0)	Enables lower from off feature.	✗	✓
Warm up time	0	0 to 999	Number of minutes that the output is kept at full so that the lamp can 'warm up' before being dimmed.	✗	✓
Lux off period	0	0 to 999 in minutes (0=15 seconds)	Number of minutes above the Lux Off level before a lux switching decision is made.	✗	✓
Lux switching enabled	1	Enable (1) or disable (0)	Enables or disables the output channel to respond to lux switching commands.	✗	✓
Detector enabled	1	Enable (1) or disable (0)	Enables the output channel to be controlled by detector occupancy.	✗	✓
Detector inhibit period	0	0 to 255	Detector inhibit period in 100s of milliseconds (255 = 25 seconds).	✗	✓

Advanced programming

Parameter Name	Default Value	Range / Options	Description	Programming Devices	
				UHS4	UNLCDHS
For Channel 3 (Microwave Sensor)					
Local Code	1	1 to 999	A number corresponding to the Local Code of all devices to be controlled by this Microwave input channel.	✓	✓
Sub Local Code	Not set	1 to 99	A number corresponding to the Sub Local Code of all devices to be controlled by this Microwave input channel.	✓	✓
Area Code(s)	Not set	1 to 999 0 to clear	A number corresponding to the Area Code of all devices to be controlled by this Microwave input channel. Up to 10 Area Codes can be set for Channel 3.	✓	✓
Sensitivity On	5	1 (min) to 9 (max)	Sensitivity level for detecting movement when the detector is already on. <i>*UHS4 sets Sensitivity On and Off to the same value.</i>	✓*	✓
Sensitivity Off	5	1 (min) to 9 (max)	Sensitivity level for detecting movement when the detector is off. <i>*UHS4 sets Sensitivity On and Off to the same value.</i>	✓*	✓
Walk Test LED	Off	On or Off	When set to On this causes a red LED to flash on the sensor when it detects movement. Use this feature to check for adequate Sensitivity On/Off levels.	✓	✓
Lux on level (Switch level on)	400	0 (disabled) or 1 to 999	Sets a minimum light level below which the Microwave sensor is enabled, allowing lights to be turned on by movement.	✓	✓
Lux off level (Switch level off)	700	0 (disabled) or 1 to 999	Sets a maximum light level above which the Microwave sensor is disabled, preventing lights from being turned on by movement.	✓	✓
Light Level (maintained illuminance)	550	0 (disabled) or 1 to 999	Sets a target light level to be maintained by the lighting system.	✓	✓
Power Up State	On	On or Off	When power is applied to the unit the Microwave sensor goes through a settling down period of up to 40 seconds. With Power Up set to On, the outputs go to the last levels for up to 15 seconds, then the Local On Scene (scene 1 by default) is invoked plus the Time Adjustment Period, after which the Local Step/Off Scene (scene 20 by default) is invoked (assuming no movement is detected). With Power Up set to Off, the outputs go to the last levels until movement is detected.	✗	✓
Disable Detector	N	Y or N	Disables detection, leaving the relay output permanently off with the dimming output operational. This mode is used when the unit is for maintained illuminance only.	✗	✓
Speed On	10	3 to 255 seconds	The time between maintained illuminance messages being sent out, after the setup period has elapsed and after occupancy is first detected.	✗	✓
Speed Set	3	3 to 255 seconds	The time between maintained illuminance messages being sent out during the setup period	✗	✓
Set Seconds	120	0 to 999 seconds 0 to disable	Determines how long the set-up period lasts on power-up or on setting change after occupancy is first detected.	✗	✓

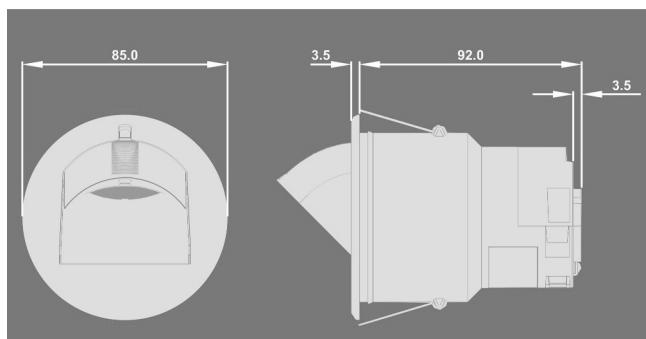
Advanced programming

Parameter Name	Default Value	Range / Options	Description	Programming Devices																			
				UHS4	UNLCDHS																		
<i>When movement is detected...</i>																							
Local On Scene Fade Rate	1 1 second	1 to 20 0 to 255*	The local scene request sent to all devices with the Local Code specified above, when movement is detected.	x	✓																		
Area On Scene Fade Rate	101 1 second	101 to 220 0 to 255*	The area scene request sent to all devices with the Area Code(s) specified above, when movement is detected. <i>NOTE: The Area On Scene is ignored unless one or more Area Codes are set for the corresponding input channel and they match the Area Codes set in any output channel.</i>	x	✓																		
Time adjustment	10 mins	0 (10 seconds) 1 to 99 minutes	Once the detector is turned on, this value sets how long the lights will stay on once movement has ceased. The 10 second setting is for commissioning only.	✓	✓																		
<i>When no movement is detected for Time Adjustment...</i>																							
Local Step Scene Fade Rate Timeout	20 1 second 0	1 to 20 0 to 255* 0 to 255*	If a Local and/or Area Step Scene is specified this will be requested first when the Sensor switches off. If a Step Scene is not specified, or if it times out, the Local and/or Area Off Scene will be implemented.	x	✓																		
Local Off Scene Fade Rate	20 1 second	1 to 20 0 to 255*	<i>NOTE: Area Step and Off Scenes are ignored unless one or more Area Codes are set for the corresponding input channel and they match the Area Codes set in any output channel.</i>	x	✓																		
Area Step Scene Fade Rate Timeout	220 1 second 0	1 to 20 0 to 255* 0 to 255*	The values of the Timeout parameters associated with Step Scenes determine whether or not the scene is actually recalled and whether or not to recall the Off Scene: Time / delay table <table> <thead> <tr> <th>Value</th> <th>Fade rate time</th> <th>Timeout delay period</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>No fade</td> <td>Ignore the Step scene</td> </tr> <tr> <td>1 to 59</td> <td>1 to 59 seconds, in 1 second increments</td> <td>1 to 59 seconds, in 1 second increments</td> </tr> <tr> <td>60 to 177</td> <td>1 to 59.5 minutes, in 0.5 minute increments</td> <td>1 to 59.5 minutes, in 0.5 minute increments</td> </tr> <tr> <td>178 to 254</td> <td>1 to 20 hours, in 15 minute increments</td> <td>1 to 20 hours, in 15 minute increments</td> </tr> <tr> <td>255</td> <td>Infinite fade</td> <td>No timeout recall the specified scene only</td> </tr> </tbody> </table>	Value	Fade rate time	Timeout delay period	0	No fade	Ignore the Step scene	1 to 59	1 to 59 seconds, in 1 second increments	1 to 59 seconds, in 1 second increments	60 to 177	1 to 59.5 minutes, in 0.5 minute increments	1 to 59.5 minutes, in 0.5 minute increments	178 to 254	1 to 20 hours, in 15 minute increments	1 to 20 hours, in 15 minute increments	255	Infinite fade	No timeout recall the specified scene only	x	✓
Value	Fade rate time	Timeout delay period																					
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255	Infinite fade	No timeout recall the specified scene only																					
Area Off Scene Fade Rate	220 1 second	1 to 20 0 to 255*		x	✓																		

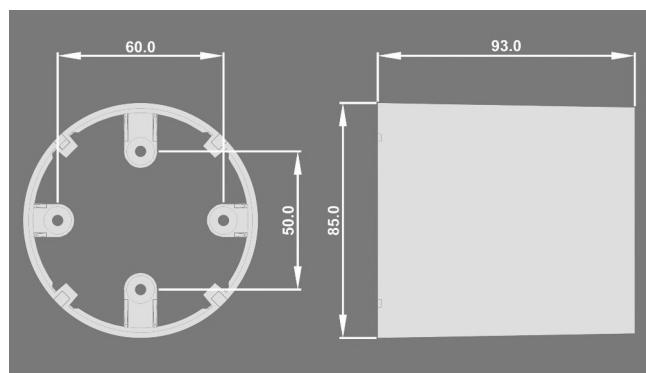
Technical data

Dimensions	See diagrams opposite
Weight	0.1kg
Supply Voltage	230VAC +/- 10%
Frequency	50Hz
Maximum Load	
Channel 1 (switching):	10A of lighting and/or ventilation including incandescent, fluorescent, compact fluorescent, low voltage (by switching the primary of transformer).
Channel 2 (dimming):	Maximum number of 1-10V ballasts is 10. On 2000mW, Off 1300mW
Power consumption	2.5mm ²
Terminal Capacity	2
Receiver Class	<10% on g3 band (default band)
Transmitter Duty Cycle	<0.1% on g2 band <1% on g1 band
Range	The maximum RF range between An-10 devices is 100m in free air and up to 30m indoors. However the materials used within a building will vary and this will impact upon the RF range. In reality the nature of how the An-10's hybrid-mesh works means that in most scenarios the individual range of an An-10 product will not be important.
Temperature	0°C to 35°C
Humidity	5 to 95% non-condensing
Material (casing)	Flame retardant ABS Type Class 2
Safety	The microwave radiation emitted by these units is extremely low power and complies with ANSI standard "IEEEC95.1-1999 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields 3kHz 300GHz."

MWS3A-AT-AD



MWS3A-DBB



Hereby, CP Electronics Ltd, declares that this MWS3A-AT-DD is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The declaration of conformity may be obtained for CP Electronics Ltd Brent Crescent, London, NW10 7XR, UK.

UK patent GB2498568 and international patents applied for.

Microwave and RF frequency compatibility

The allowable frequency of operation of this product is different depending on region. Please select the correct order code using the table below.

Suffix 1	Suffix 2	Region	RF Frequency	MW frequency	Compliance
blank	blank	UK, China, India, Middle East, Malaysia, Hong Kong, Singapore	868MHz	10.687GHz	EN300 220-2 V2.1.2
-R2	blank	All of Europe <u>except:</u> UK, France, Portugal, Germany, Switzerland, Austria, Slovak Republic, Republic of Ireland	868MHz	10.525GHz	EN301 489-1 V1.8.1
-R3	blank	France, Portugal, Switzerland	868MHz	9.900GHz	EN301 489-3 V1.2.1
-R4	blank	Germany, Austria, Slovak Republic	868MHz	9.350GHz	LVD-2006/95/EC
-R5	blank	Republic of Ireland	868MHz	10.41GHz	
-R2	-A2	Australia and New Zealand	915MHz	10.525GHz	AS/NZS 4268:2008

Part numbers

	Part number	Description
Detector	MWS3A-AT-AD	RF Ceiling microwave presence detector - 1-10V
Accessories	MWS3A-DBB	Surface mounting box
	UHS4	Programming IR handset
	UNLCDHS	Universal LCD IR handset

IMPORTANT NOTICE!

This device should be installed by a qualified electrician in accordance with the latest edition of the IEE Wiring Regulations and any applicable Building Regulations.



Due to our policy of continual product improvement CP Electronics reserves the right to alter the specification of this product without prior notice.



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